

Date: Monday, 06/10/2008 1:21:05 PM  
 User: Julie Lecocq

## Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: LEFT ARM WELDMENT
Job Number	: 42476		
Estimate Number	: 12279		
P.O. Number	:	Part Number	: D3354041 <b>FR</b>
This Issue	: 06/10/2008 S.O. No. :	Drawing Number	: D3354 REV C
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: // Type : LARGE FAB ASSY	Drawing Revision	: C
Previous Run	: 36213	Material	:
Written By	:	Due Date	: 24/10/2008
Checked & Approved By	: <u>JLP 08.10.06</u>	Qty:	<b>(2)</b> Um: Each
Comment	: est rev. A 06.02.09 new issue EC est B 07.05.14 rev B dwg EC Est Rev:C 07-12-10 rev C dwg DD verified by:EC		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	D33549	Handle Socket
		<b>2</b>
Comment: Qty.: 1.0000 Each(s)/Unit Total : <del>8.0000</del> Each(s) pick: qty part number description batch 1 D3354-9 Handle socket <u>B44362</u> <u>B42498</u> ✓ <b>Pl 09.04.30</b>		
2.0	D33541	Inner Shaft
		<b>2</b>
Comment: Qty.: 1.0000 Each(s)/Unit Total : <del>8.0000</del> Each(s) pick: qty part number description batch 1 D3354-1 Inner shaft ✓ <u>B44362</u> <b>Pl 09.04.30</b>		
3.0	D33547	Left Arm Plate
		<b>2</b>
Comment: Qty.: 1.0000 Each(s)/Unit Total : <del>8.0000</del> Each(s) pick: qty part number description batch 1 D3354-7 Left arm plate ✓ <u>B36233</u> <b>Pl 09.04.30</b>		
4.0	D33543	Wheel Shaft
		<b>2</b>
Comment: Qty.: 1.0000 Each(s)/Unit Total : <del>8.0000</del> Each(s) pick: qty part number description batch 1 D3354-3 Shaft <u>B36649</u> ✓ <b>Pl 09.04.30</b>		

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Drawing Name: LEFT ARM WELDMENT

Job Number: 42476

Part Number: D3354041

Job Number:



Seq. #: Machine Or Operation: Description :

5.0 TP134 Inventory



Comment: Qty.: 1.0000 Each(s)/Unit Total : ~~6~~ 0000 Each(s)  
TP-134 TENSION PIN  
Batch: M110302 ✓

09-05-08

6.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1  
1- Weld assembly as per dwg D3354  
2-Grind welds flush as per dwg D3354

09-05-08

(X2)

7.0 QC9 VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

09-05-11 (2)

8.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

09/05/11 (X2)

9.0 POWDER COATING POWDER COATING



Comment: POWDER COATING  
1-Mask areas indicated on dwg D3354  
2-Powder Coat Fire Red (Ref: 4.3.5.10) as per QSI 005 4.3

11/02091

START TIME: 8:30  
OVEN TEMPERATURE: 320°  
FINISH TIME: 9:00

09-05-13

(2)

10.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09-05-13 X2

11.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1  
Identify and Stock  
Location: INT

3AD 09-05-13

(2)

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: LEFT ARM WELDMENT

Job Number: 42476

Part Number: D3354041

Job Number:



Seq. #:

Machine Or Operation:

Description :

12.0

QC21

FINAL INSPECTION/W/O RELEASE



09/05/15 *[Signature]*

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



*MF*  
09-05-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

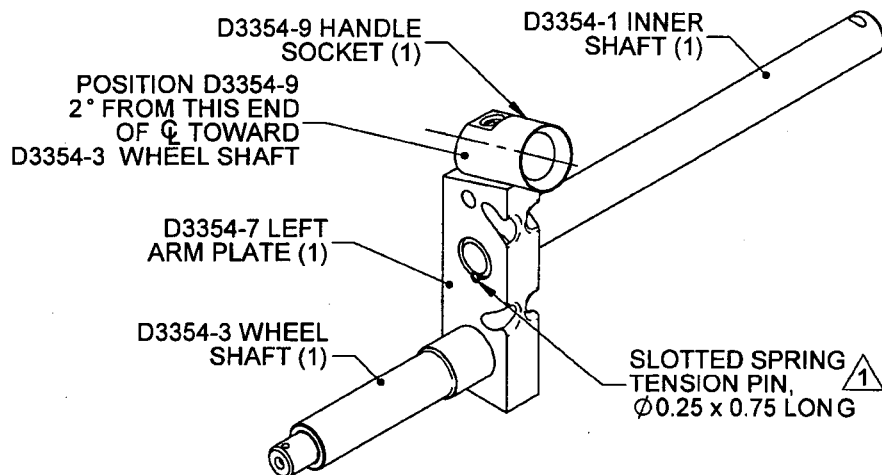
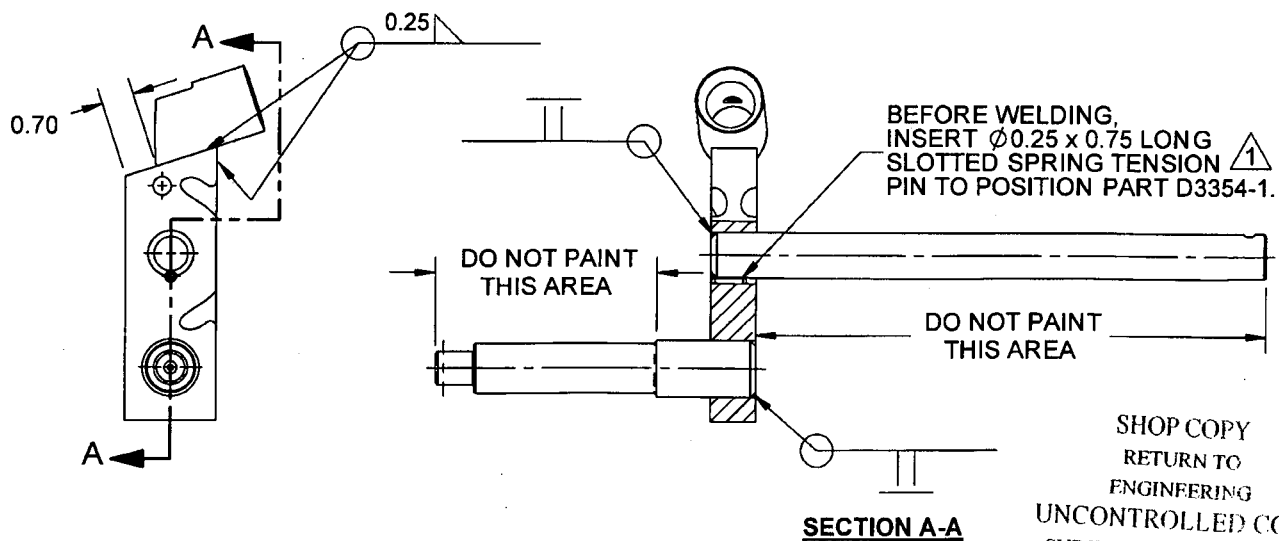
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN <i>RF</i>	DRAWN BY <i>DC</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>lb</i>	APPROVED <i>MP</i>	DRAWING NO. <b>LEFT ARM WELDMENT</b>	REV. C SHEET 1 OF 7
DATE <b>07.12.06</b>		TITLE <b>D3354</b>	SCALE 1:4
REV	DATE	DESCRIPTION	
A	04.12.13	NEW ISSUE	
B	07.02.02	REVISED DIMENSIONS	
C	07.12.06	CHANGE TOLERANCE ON D3354-7 LEFT ARM PLATE HOLE FOR D3354-3 WHEEL SHAFT	

**RELEASED**  
07/12/07 *MP***D3354-042 MIRROR ARM WELDMENT****D3354-041 LEFT ARM WELDMENT****NOTES:**

- 1) POSSIBLE SUPPLIER: SPAENAUR, P/N TP-134
- 2) WELD PER DART QSI 004
- 3) FINISH: POWDER COAT PAINT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.010 TO 0.020

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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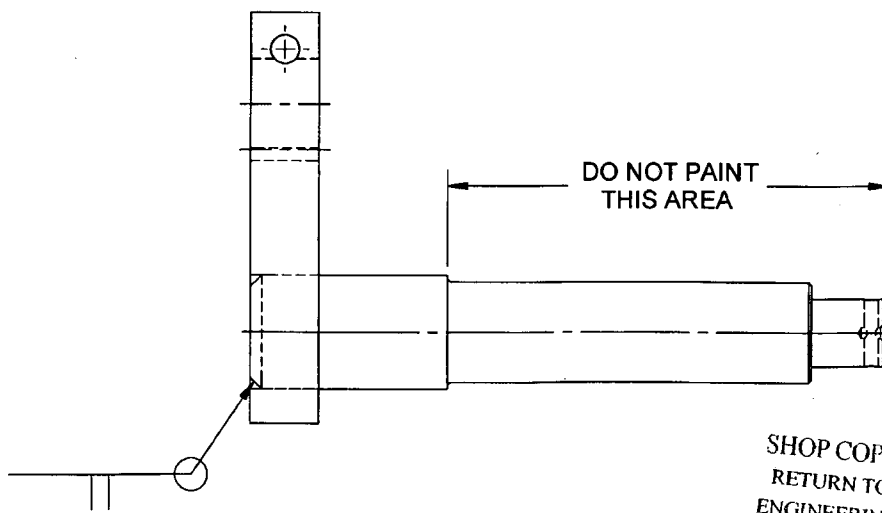
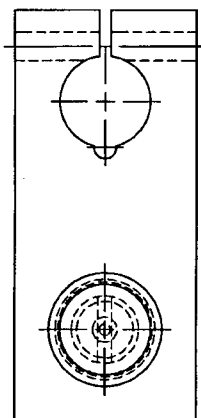
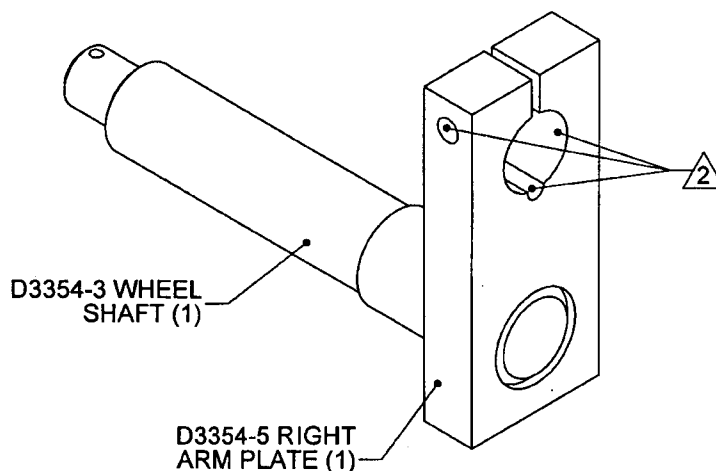
**NOTE:** Date & initial all entries



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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3354</b>	REV. C SHEET 2 OF 7
DATE <b>07.12.06</b>		TITLE <b>LEFT ARM WELDMENT</b>	SCALE 1:2

**RELEASED**  
*01/12/07 [Signature]*



**D3354-043 RIGHT ARM WELDMENT**

**NOTES:**

- 1) WELD PER DART QSI 004
- 2) COVER INSIDE HOLES PRIOR PAINTING
- 3) FINISH: POWDER COAT PAINT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) BREAK ALL SHARP EDGES 0.010 TO 0.020

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

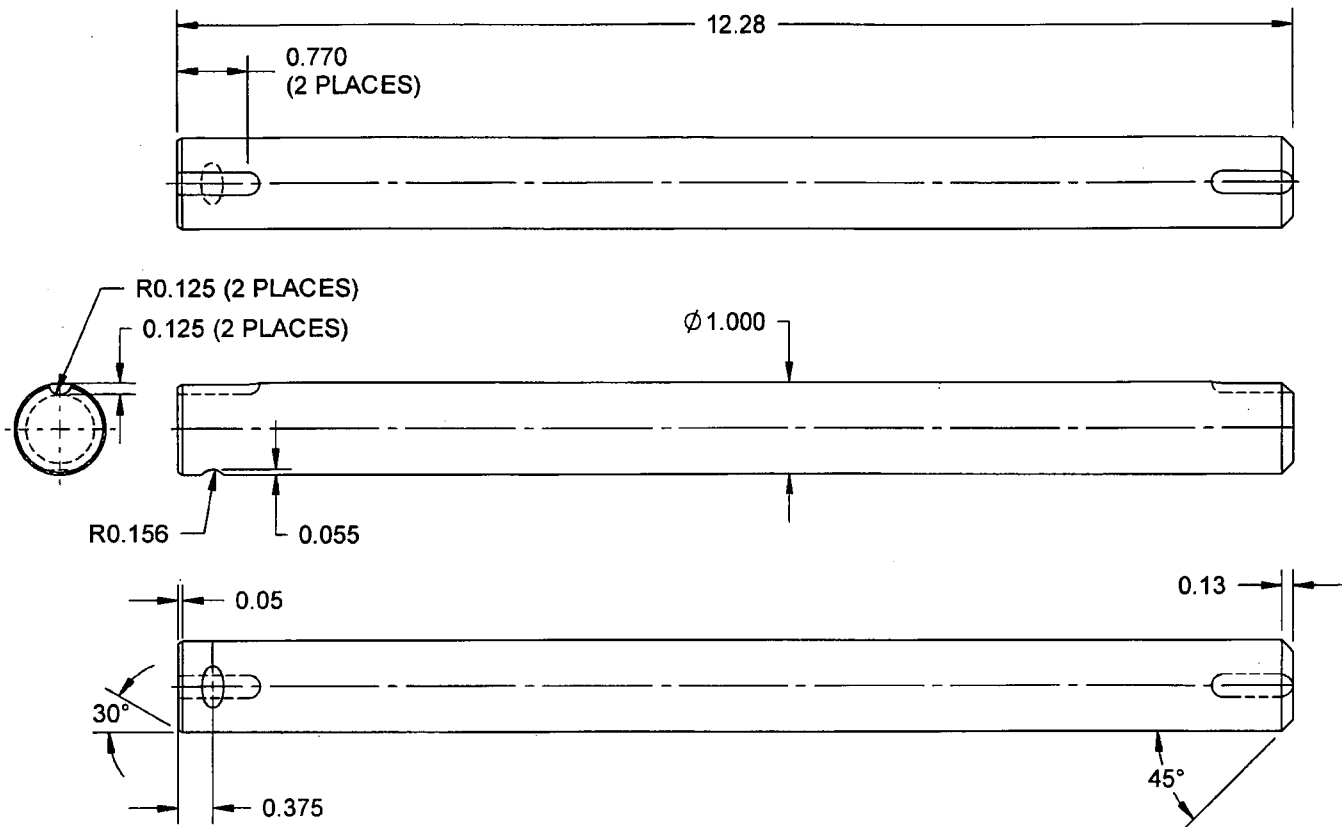
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

DESIGN <i>[Signature]</i>	DRAWN BY <i>JC</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3354</b>	REV. C SHEET 3 OF 7
DATE <b>07.12.06</b>		TITLE <b>LEFT ARM WELDMENT</b>	SCALE 1:2

**RELEASED**  
*07/12/07 [Signature]***D3354-1 INNER SHAFT**

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NO. *42470*

**NOTES:**

- 1) MATERIAL: AISI-4140 OR ASTM A304-02/ A-434-BC / A193-03 - GRADE-B7/ A29-03/ A322-91  
OR UNS#-G41400 ROUND BAR,  $\phi 1.250$  (REF. DART SPEC. M4140H-R)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.010

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

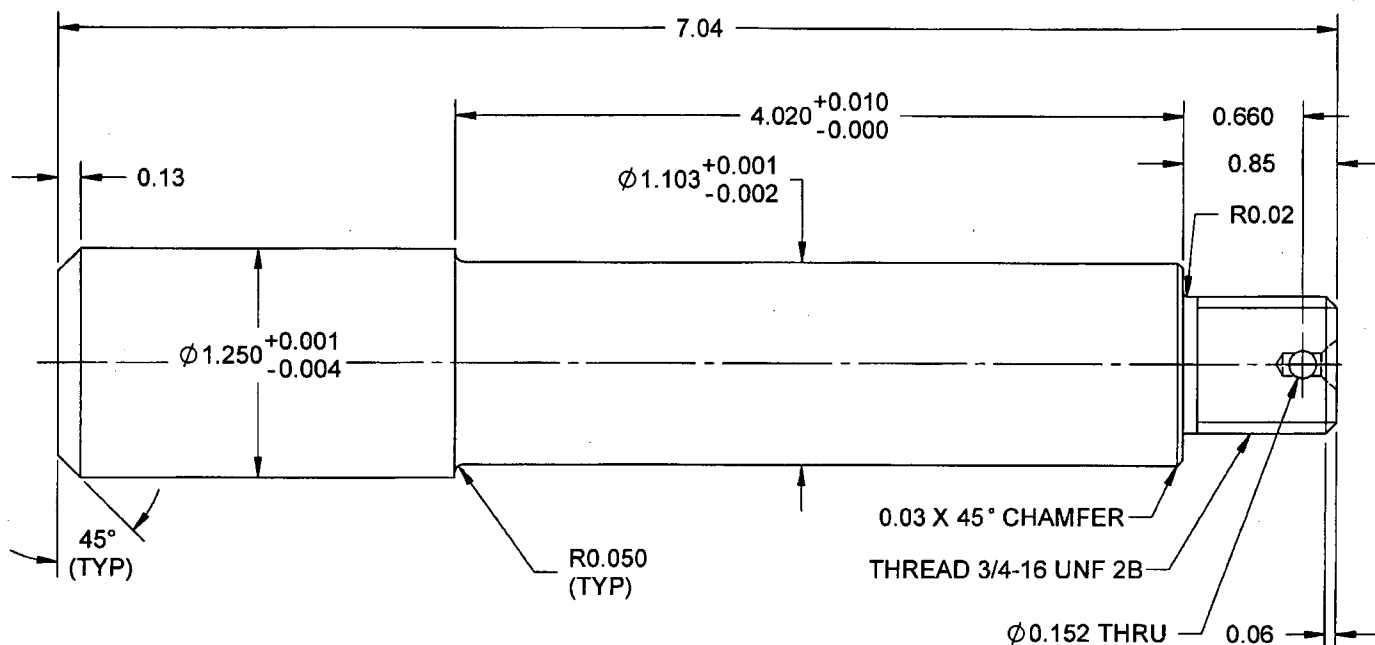
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**DART**

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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3354</b>	REV. C SHEET 4 OF 7
DATE <b>07.12.06</b>		TITLE <b>LEFT ARM WELDMENT</b>	SCALE 1:1

**RELEASED**  
07.12.07 *[Signature]***D3354-3 WHEEL SHAFT**

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WORK ORDER  
NO. *112476*

**NOTES:**

- 1) MATERIAL: AISI-4130/ AISI-4140 OR ASTM A304-02/ A-434-BC/ A193-03 - GRADE-B7/ A29-03/ A322-91 OR UNS#-G41400 ROUND BAR,  $\phi$  1.250 (REF. DART SPEC. M4140H-R)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.010 TO 0.020

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

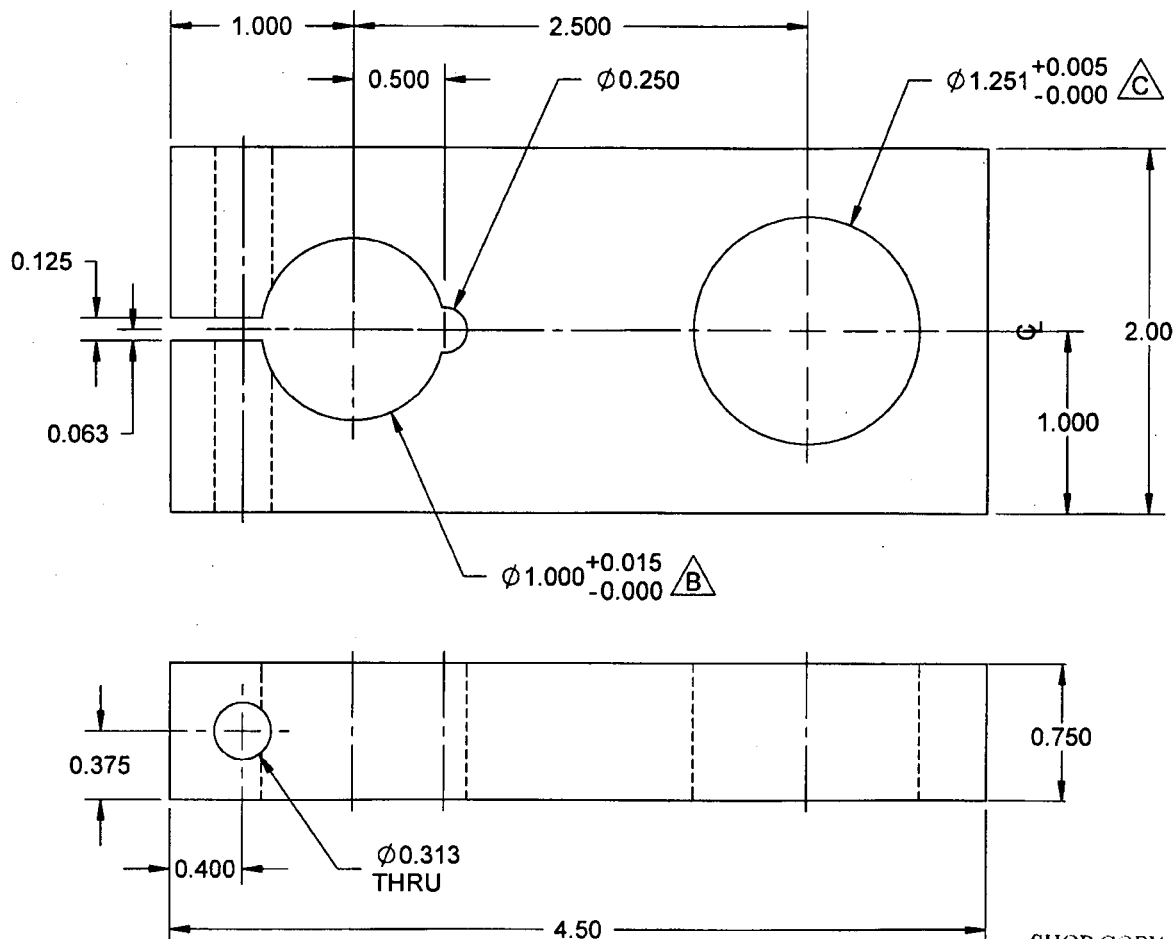
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries



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CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D3354</b>	REV. C SHEET 5 OF 7
DATE <b>07.12.06</b>		TITLE <b>LEFT ARM WELDMENT</b>	SCALE 1:1

RELEASED  
07/12/07 *[Signature]*



### D3354-5 RIGHT ARM PLATE

#### NOTES:

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A569/A570 OR CSA G40.21, 38W/44W/50W/60W/70W, 0.75 THICK MILD STEEL BAR (REF. DART SPEC. M1010-B)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.010 TO 0.020

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

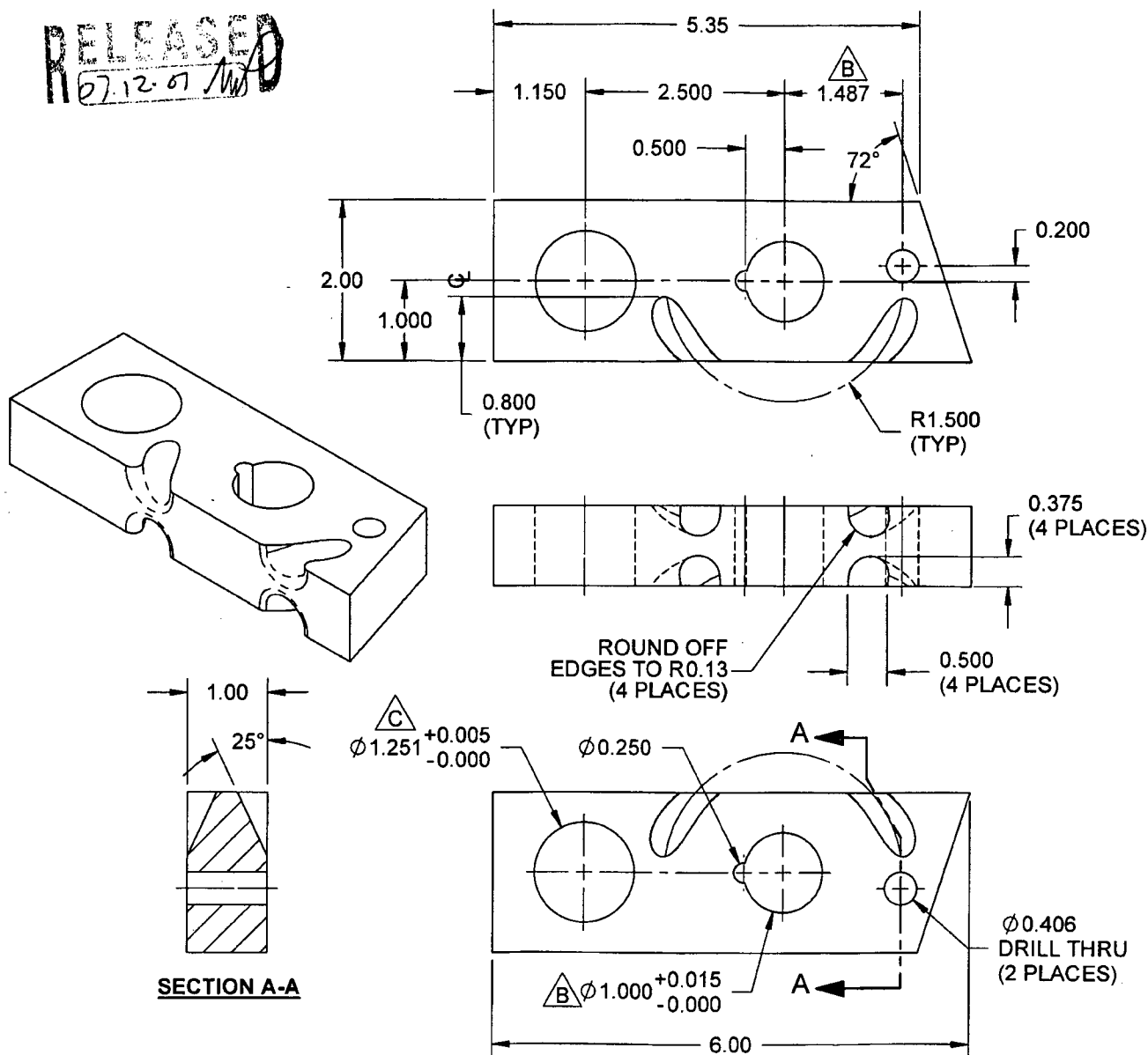
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**DART**

DESIGN <i>PH</i>	DRAWN BY <i>JC</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>LA</i>	APPROVED <i>MM</i>	DRAWING NO. <b>D3354</b>	REV. C SHEET 6 OF 7
DATE <b>07.12.06</b>	TITLE <b>LEFT ARM WELDMENT</b>		SCALE 1:2

**RELEASED**  
07.12.07 *MM***D3354-7 LEFT ARM PLATE****NOTES:**

- 1) MATERIAL: AISI 1010-1025 OR ASTM A36/A366/A569/A570 OR CSA G40.21, 38W/44W/50W/60W/70W, 1.00 THICK MILD STEEL BAR (REF. DART SPEC. M1010-B)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.010 TO 0.020

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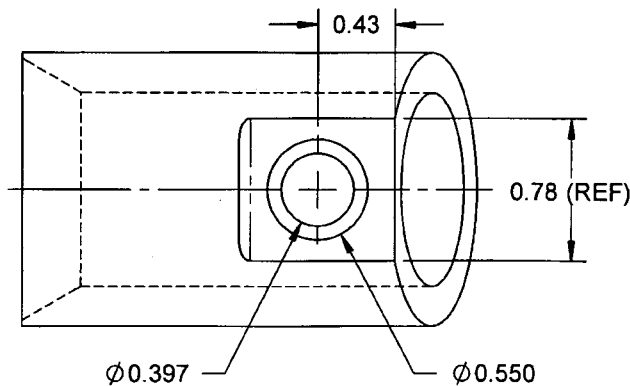
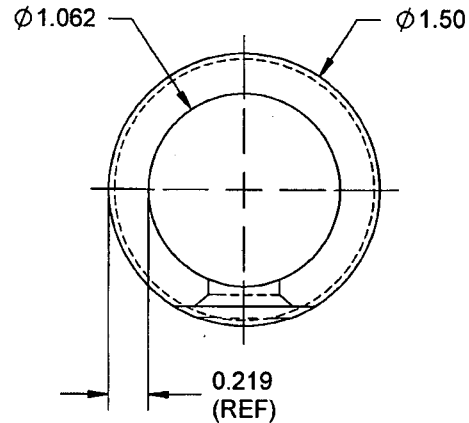
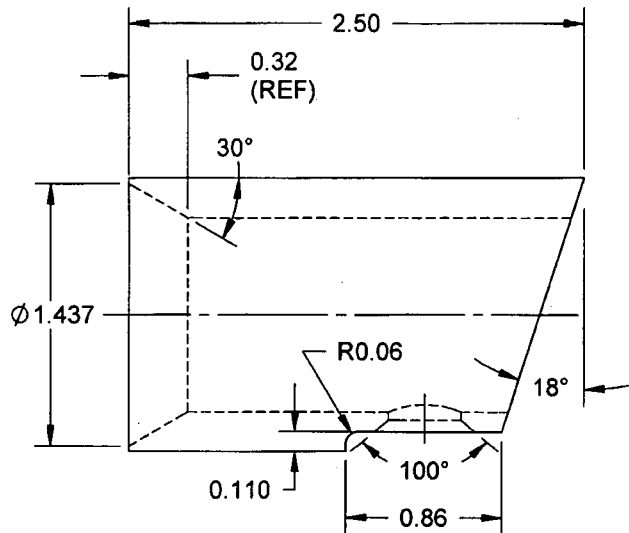
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CHECKED <i>LS</i>	APPROVED <i>MP</i>	DRAWING NO. <b>D3354</b>	REV. C SHEET 7 OF 7
DATE <b>07.12.06</b>	TITLE <b>LEFT ARM WELDMENT</b>		SCALE 1:1

**D3354-9 HANDLE SOCKET****NOTES:**

- 1) MATERIAL: AISI 1010-1025 SEAMLESS ROUND TUBING PER MIL-T-5066 OR ASTM A513-00 MT1020 SRA OR AMS 5075 OR AMS 5077, (REF. DART SPEC. M1020TR1.250W.219)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
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